

The Web & Digital Humanities: What about Semantics?

Lyon, WWW 2012
20 April 2012



Prof. Dr. Stefan Gradmann
Humboldt-Universität zu Berlin / School of Library and Information Science
stefan.gradmann@ibi.hu-berlin.de



Overview



- What are 'Digital Humanities'?
- How do they use 'semantic' technology?
- Issues
 - Signification and Meaning
 - Text, Context, Subtext
 - Interpretation
 - Logic
- How 'semantic' is the Semantic Web – as seen from the DH perspective?
- “Thinking in the Graph” - will Digital Humanists ever do so?



What are 'Digital Humanities'?



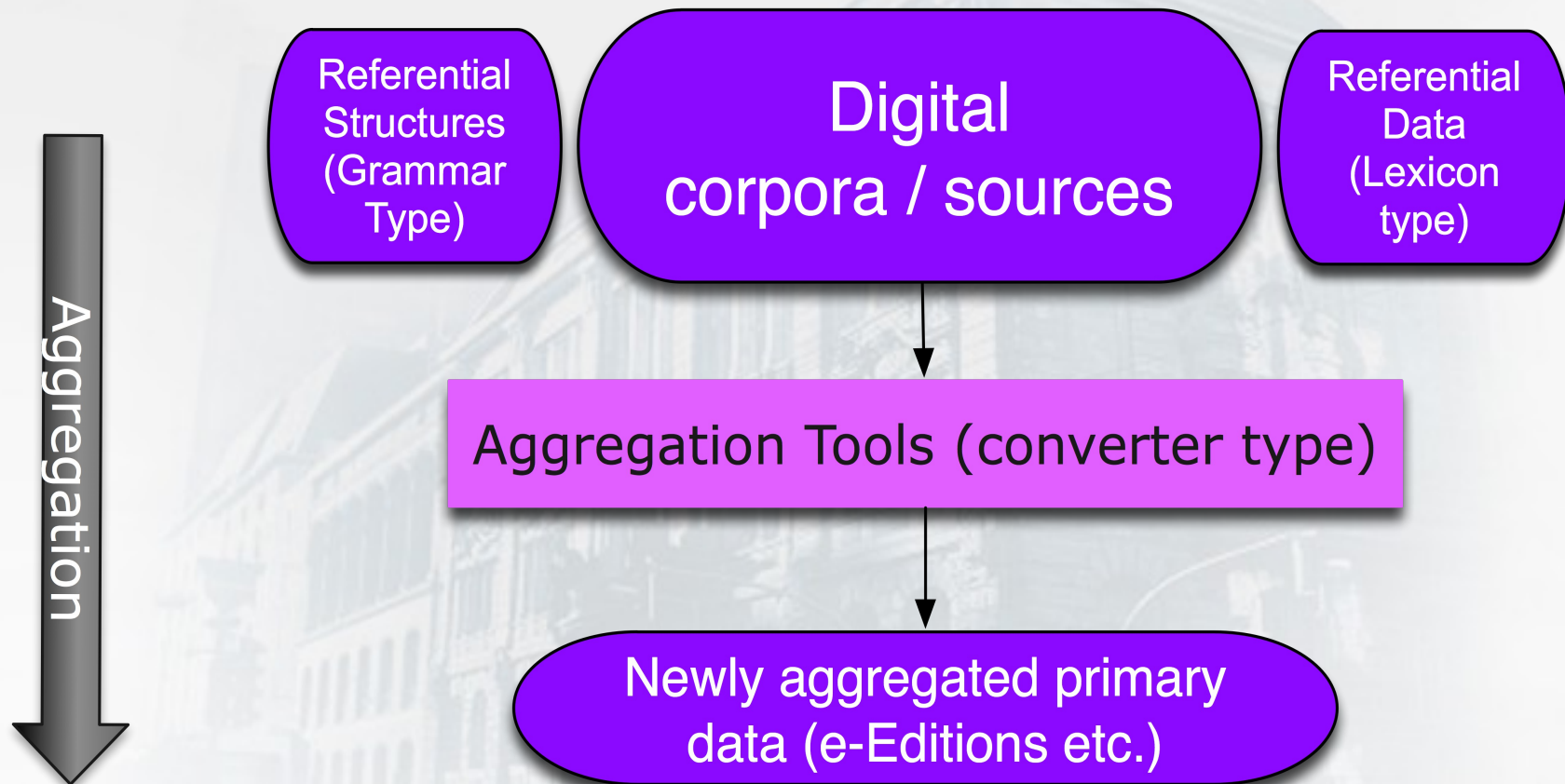
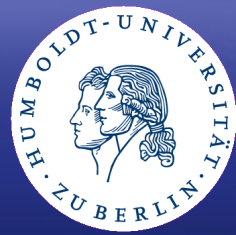
- A new discipline? Old disciplines turning 'digital'?
- “a field that is endlessly wrestling with its self-definition” (Tara L. Andrews)
- Or again Stephen Ramsay on “Who's in and Who's Out?” (<http://lenz.unl.edu/papers/2011/01/08/whos-in-and-whos-out.html>)
- All scholarly efforts concerned with '**understanding**' and '**interpretation**' (e. g. literary criticism) **in the digital** and making **use of digital instruments** (e. g. digital narratology)
- As opposed (?) to empirically grounded scientific approaches (there are no “digital sciences”!)
- Risk of regression into sterile discourse of “two cultures” (C. P. Snow)



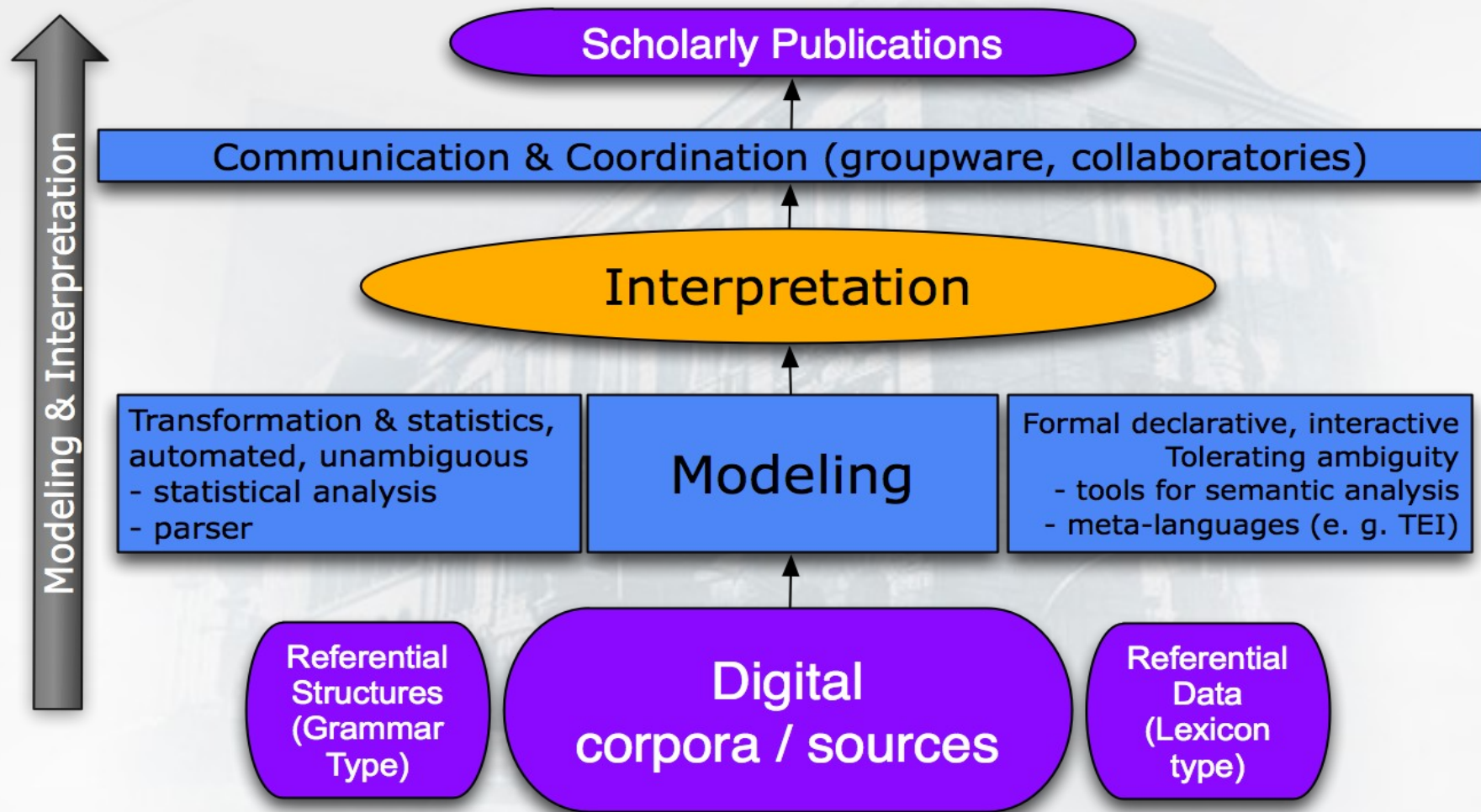
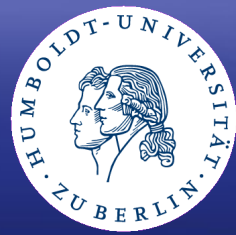
... and how do they use 'semantic' technologies? 3 examples



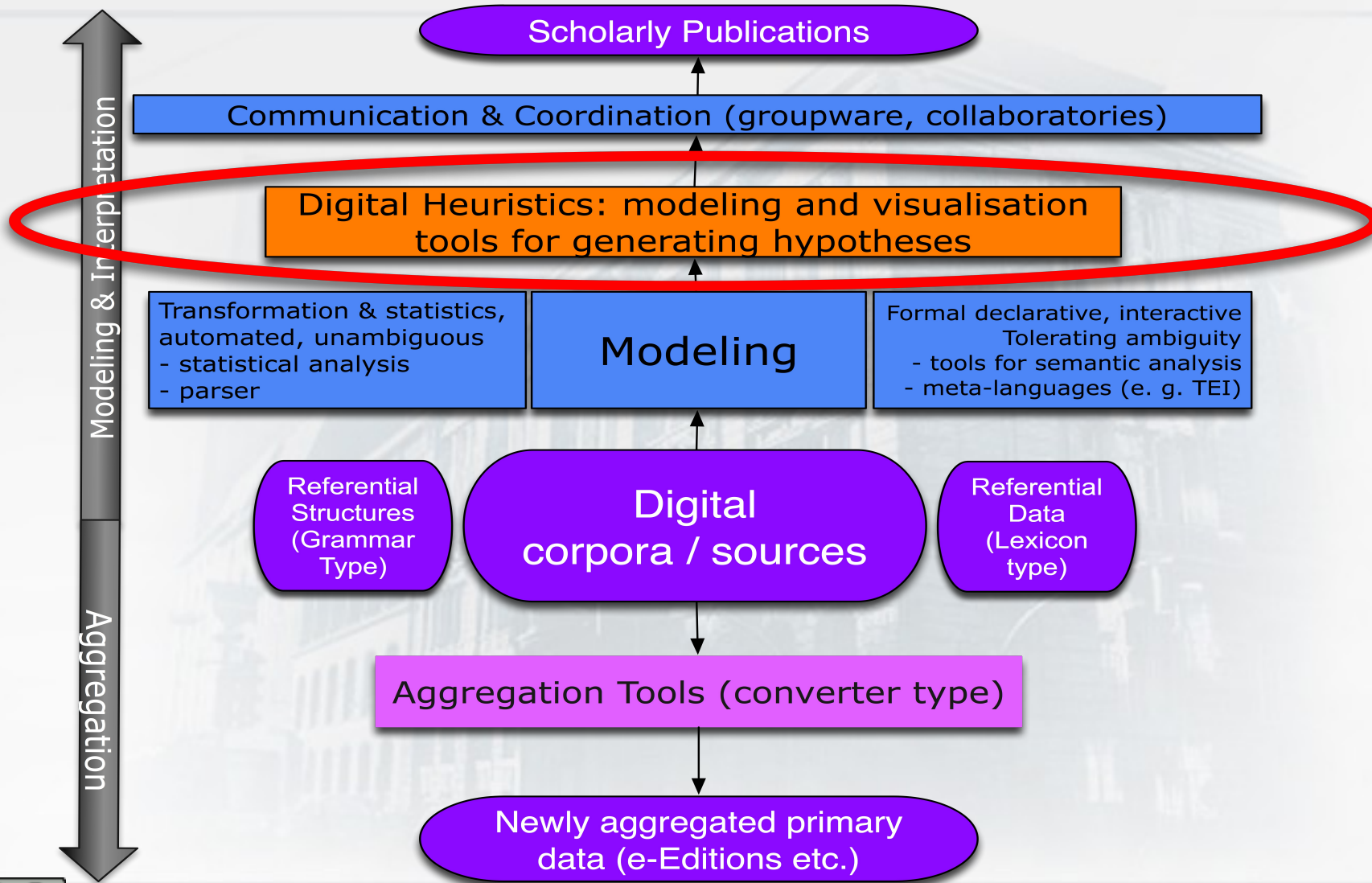
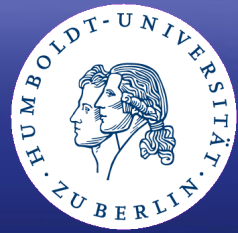
Processing of source data in the Humanities: **aggregation** ...



... modeling ...



... and Digital Heuristics?

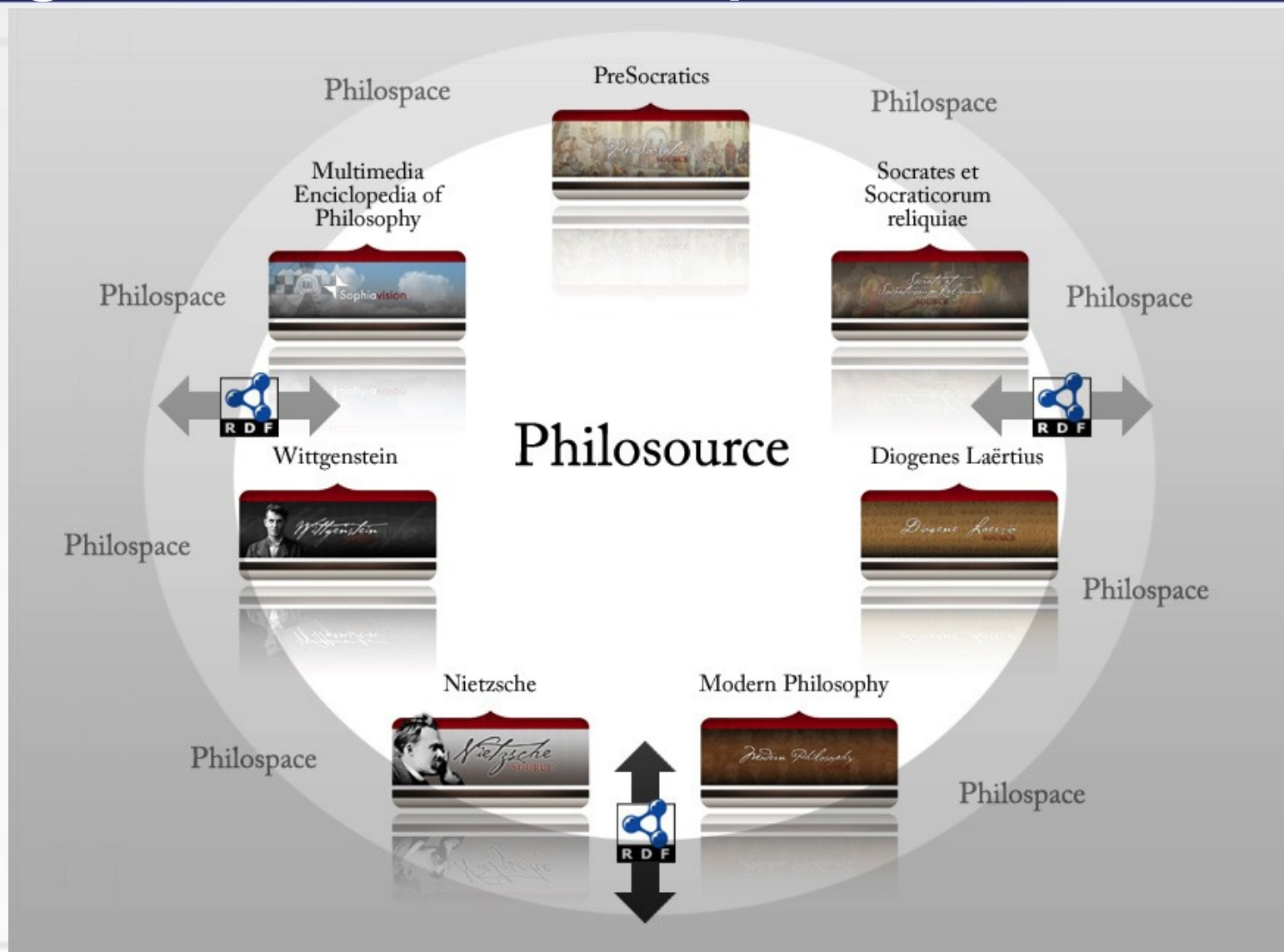


Good Practices and Better Practices

COST A32, Discovery, SemLib, Shared Canvas



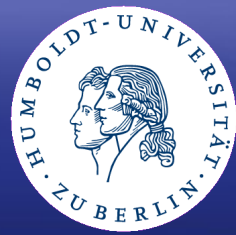
'Discovery' Corpus: Digitised Manuscripts



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HyperNietzsche: Digitisation, Presentation



Simple Mode
NietzscheSource
Facsimile Edition

Home > D'Iorio Facsimile Edition > Manuscripts > Copybook > U-II-5

MI1 MI2 MI3 MII1 MII2 MIII3 MIII5 MIII7 **UII5**

Large octavo notebook (14 x 19,5cm) bound in black. 250 lined pages often used only on the odd side; p. 53f and p. 58 in Albert Brenners hand, p. 113f in an unknown hand; p. 1-4 philological notes; thoughts, studies for *Schopenhauer as Educator*, *Richard Wagner in Bayreuth*; plans and aphorisms from the *All Too Human* period. Location: Weimar, Goethe- und Schiller-Archiv, 71/115

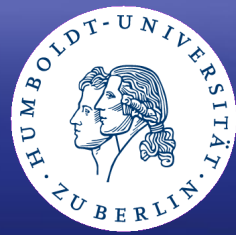
Collegati a # in questa pagina

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HyperNietzsche: Transcription, Presentation



Browse N II 6

> Home > Notebooks > N-II-6

Panorama Synoptic Context

N II 6,5[1]

transcriptions: hnm1

V. Zapf, transcription of N II 6,5[1] (vzapf-23)

image HNML Linear diplo. Print

Im Jahr 1877 wusste ich von der Zukunft gar nichts zu verlangen. Selbst Gesundheit nicht – denn diese ist ein Mittel – w a s hätte ich mit diesem Mittel erreichen wollen?

Criteria.

N-II-6,2

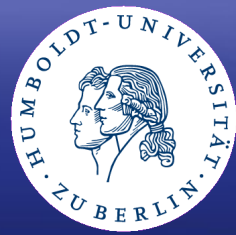
N-II-6,3

N-II-6,4

N-II-6,5



HyperNietzsche: Sources, Editions (synoptic)



NietzscheSource, colli-montinari, Search results

Simple Mode
NietzscheSource
Colli-Montinari Edition

philosophie Search
Advanced Search

Home > Colli-Montinari > Search: philosophie

List of works

- AC (6)
- DS (3)
- DW (2)
- GD (8)
- GM (12)
- GT (6)
- HL (4)
- MA (25)
- 1
- 8
- 9 Chemie der Begriffe und Empfindungen.
- 14 Der Geist der Wissenschaft im Theil, nicht im Ganzen mächtig.
- 15 Der Störenfried in der Wissenschaft.
- 35 Ersatz der Religion.
- 37 Vom Dufte der Blüten berauscht.
- 42 Zur Beruhigung.
- 45 Trotzdem.
- 76 Moralität und Erfolg.
- 88 Greis und Tod.
- 116 Der doppelte Kampf gegen das Uebel.
- 117 Gram ist Erkenntniss.
- 118 Die Wahrheit in der Religion.
- 120 Belläse Nachwachen.

Search Results

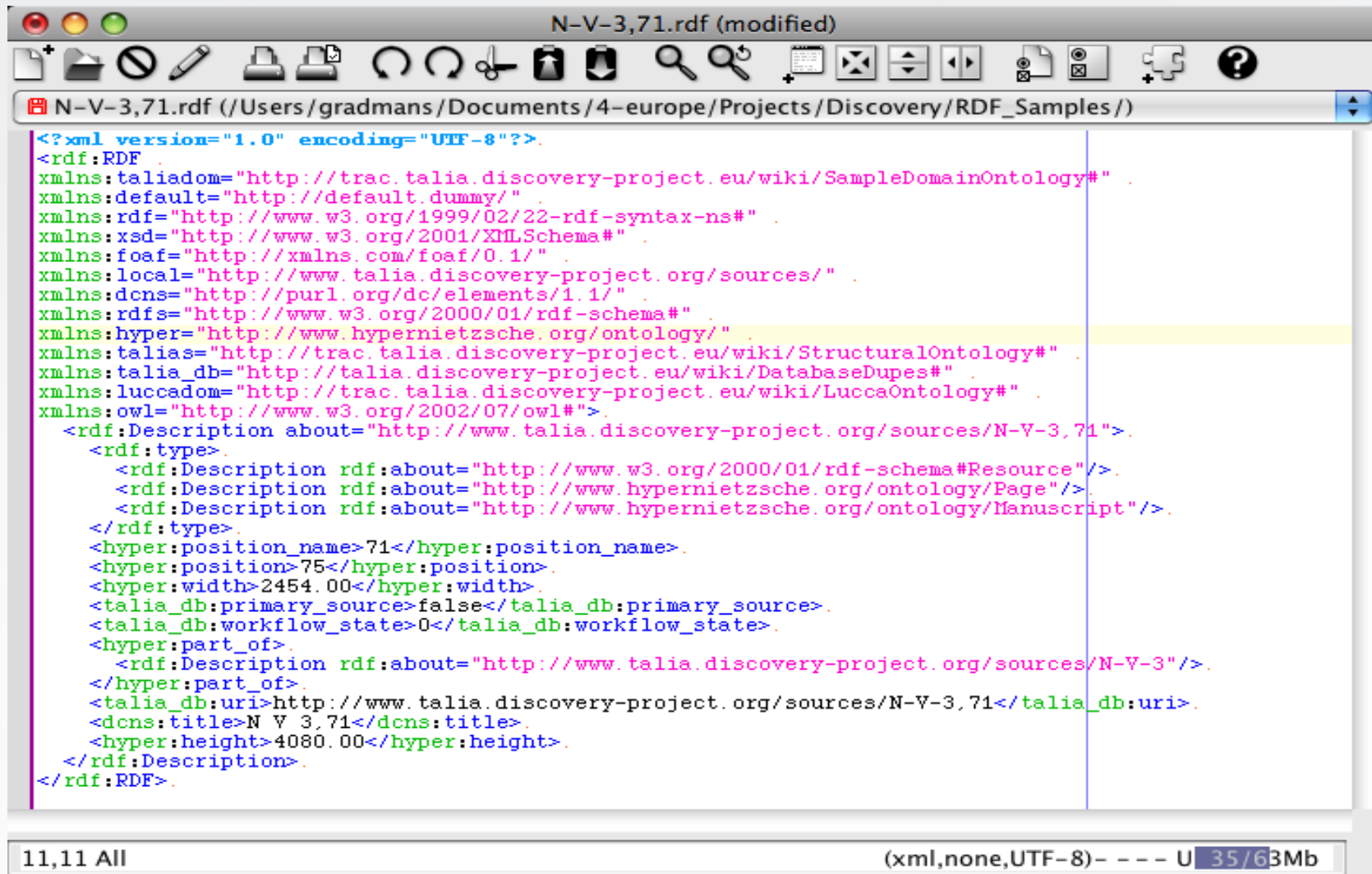
86 occurrences of the words 'philosophie' in the critical edition Colli-Montinari

Select All | Deselect All Print Results

- 42 ☒ MA, 1
...bis zum letztin veröffentlichten „Vorspiel einer **Philosophie** der Zukunft“: sie enthielten allesammt, hat man mir...
- 43 ☒ MA, 8
...— Nach einer so artigen Antwort rath mir meine **Philosophie**, zu schweigen und nicht mehr weiter zu fragen; zumal...
- 44 ☒ MA, 9, Chemie der Begriffe und Empfindungen.
...Egoismus, Wahrheit aus Irrthümern? Die metaphysische **Philosophie** half sich bisher über diese Schwierigkeit hinweg,... Wesen des „Dinges an sich“ heraus. Die historische **Philosophie** dagegen, welche gar nicht mehr getrennt von der...
- 45 ☒ MA, 14, Der Geist der Wissenschaft im Theil, nicht im Ganzen mächtig.
...unpersönlich, als in ihren Theilen behandelt. Bei der **Philosophie** nun gar, als bei der Spitze der gesammten... der Erkenntniss überhaupt aufgeworfen, und jede **Philosophie** hat unbewusst die Absicht, ihr den höchsten Nutzen... den wissenschaftlichen Einzelgebieten und der **Philosophie**. Letztere will, was die Kunst will, dem Leben und... keinen Philosophen gegeben, unter dessen Händen die **Philosophie** nicht zu einer Apologie der Erkenntniss geworden...
- 46 ☒ MA, 15, Der Störenfried in der Wissenschaft.
...7. Der Störenfried in der Wissenschaft. — Die **Philosophie** schied sich von der Wissenschaft, als sie die Frage...
- 47 ☒ MA, 35, Ersatz der Religion.
...27. Ersatz der Religion. — Man glaubt einer **Philosophie** etwas Gutes nachzusagen, wenn man sie als Ersatz... welche die Religion befriedigt hat und nun die **Philosophie** befriedigen soll, nicht unwandelbar sind; diese... Befriedigung, sondern Vernichtung verdienen. Eine **Philosophie** kann entweder so nützen, dass sie jene Bedürfnisse... weniger unterhalten, als durch eine metaphysische **Philosophie**. Von der Kunst aus kann man dann leichter in eine...
- 48 ☒ MA, 37, Vom Dufte der Blüten berauscht.
...Schoosse tragend. Diess Resultat führt zu einer **Philosophie** der logischen Weltverneinung : welche übrigens sich...



Talia: Refactoring Hyper with Semantic Web Technology

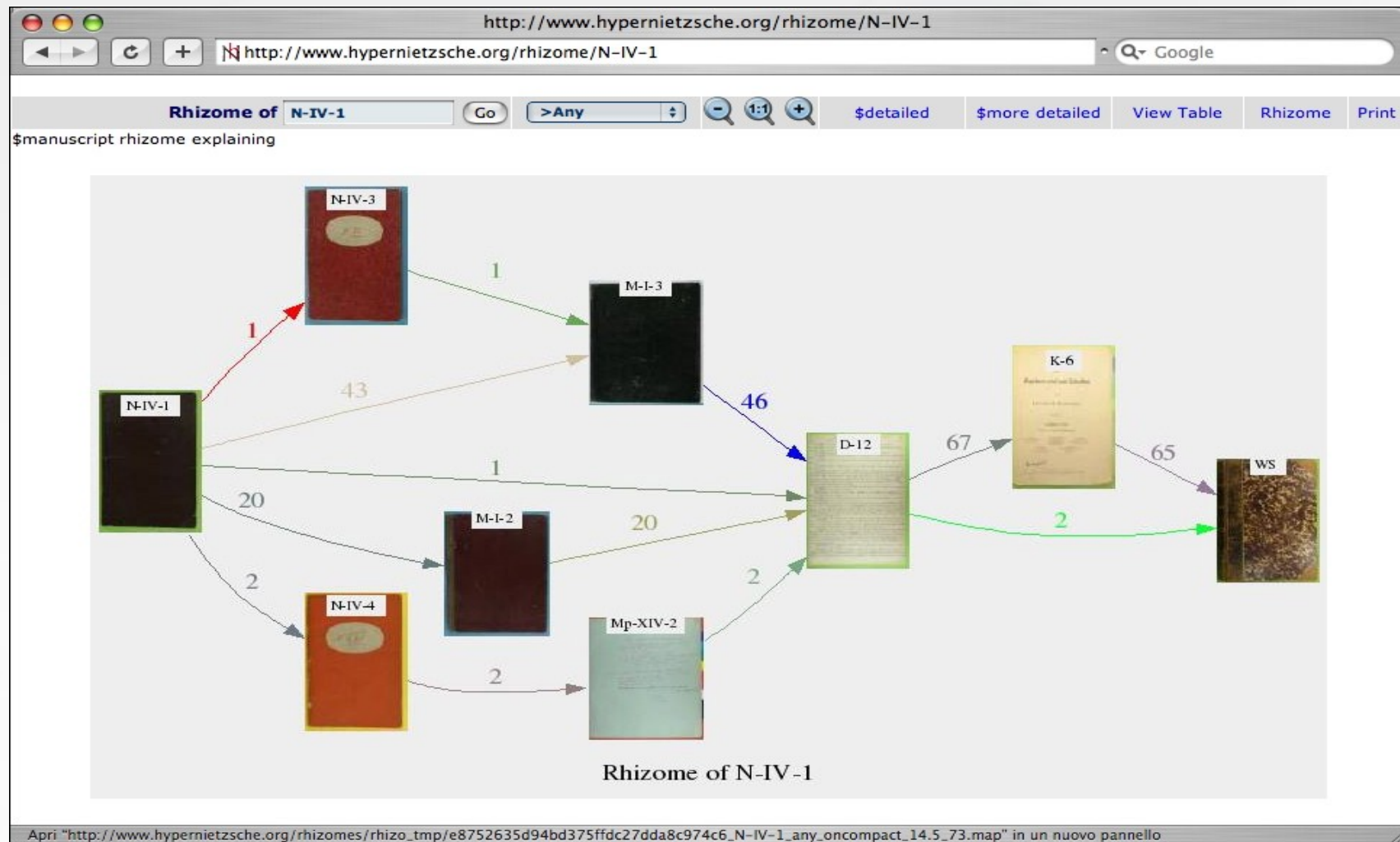
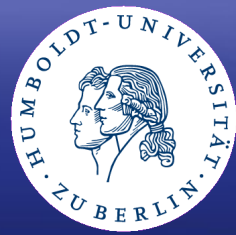


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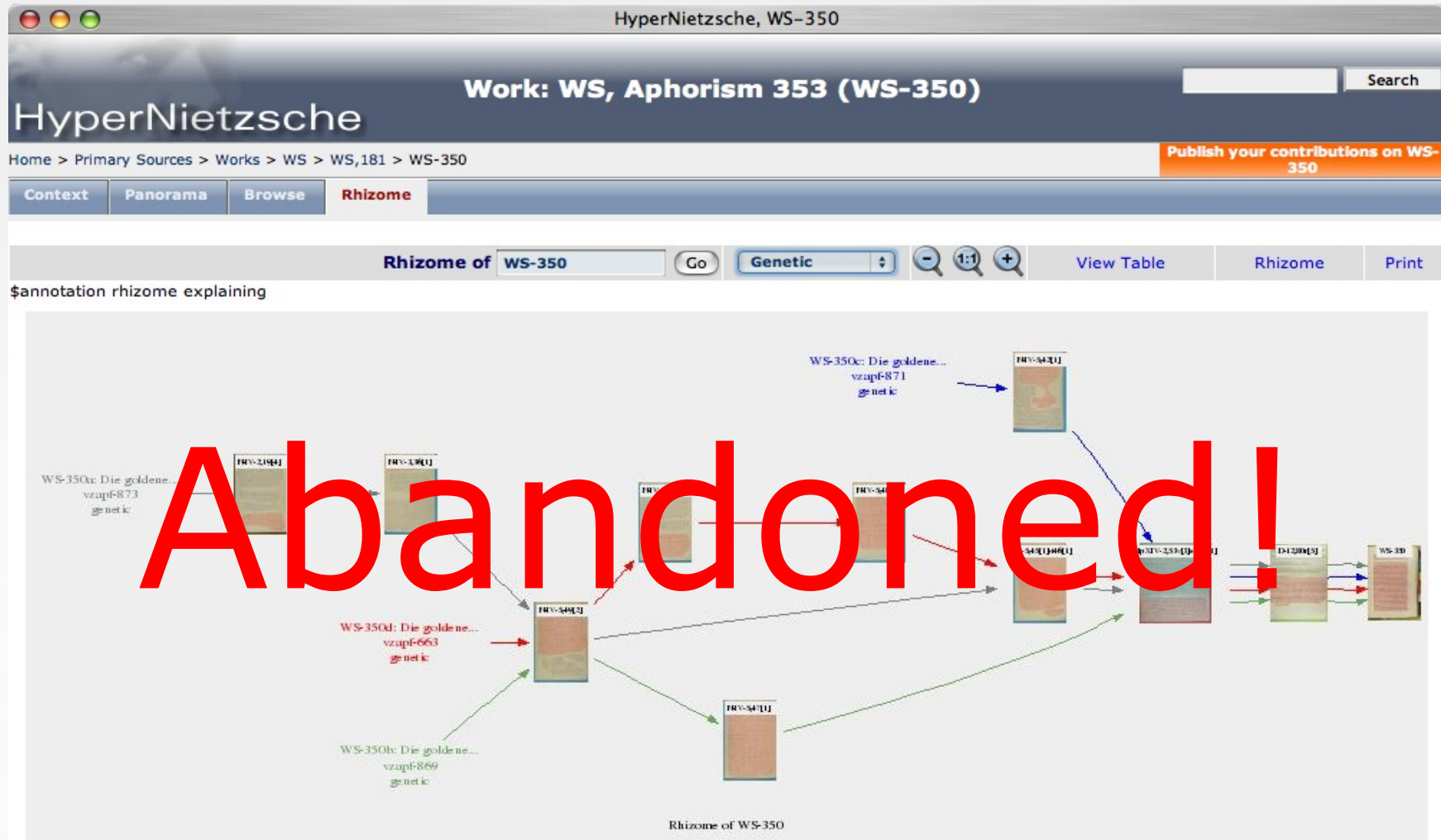
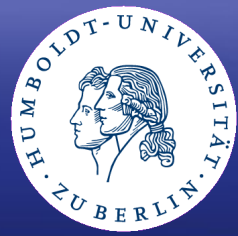
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  xmlns:default="http://default.dummy/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
  xmlns:foaf="http://xmlns.com/foaf/0.1/"
  xmlns:local="http://www.talia.discovery-project.org/sources/"
  xmlns:dcns="http://purl.org/dc/elements/1.1/"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:hyper="http://www.hypernetzsche.org/ontology/"
  xmlns:talias="http://trac.talia.discovery-project.eu/wiki/StructuralOntology#"
  xmlns:talia_db="http://talia.discovery-project.eu/wiki/DatabaseDuples#"
  xmlns:luccadom="http://trac.talia.discovery-project.eu/wiki/LuccaOntology#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  >
  <rdf:Description about="http://www.talia.discovery-project.org/sources/N-V-3,71">
    <rdf:type>
      <rdf:Description rdf:about="http://www.w3.org/2000/01/rdf-schema#Resource"/>
      <rdf:Description rdf:about="http://www.hypernetzsche.org/ontology/Page"/>
      <rdf:Description rdf:about="http://www.hypernetzsche.org/ontology/Manuscript"/>
    </rdf:type>
    <hyper:position_name>71</hyper:position_name>
    <hyper:position>75</hyper:position>
    <hyper:width>2454.00</hyper:width>
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    <talia_db:workflow_state>0</talia_db:workflow_state>
    <hyper:part_of>
      <rdf:Description rdf:about="http://www.talia.discovery-project.org/sources/N-V-3"/>
    </hyper:part_of>
    <talia_db:uri>http://www.talia.discovery-project.org/sources/N-V-3,71</talia_db:uri>
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    <hyper:height>4080.00</hyper:height>
  </rdf:Description>
</rdf:RDF>
  
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11,11 All (xml,none,UTF-8) - - - U 35/63Mb

Generating Stemmata based on Inferencing (1)



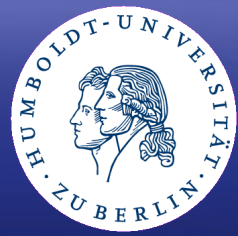
Generating Stemmata based on Inferencing (2)



Interpretation: Muruca



SwickyNotes: Ontology Based Annotation as Linked Open Data



SWickyNotes V2.1.7 (MurucaSKA)

Browser <http://dbin.org/swickynotes/murucaska/start.htm>

open-source tools for scholars.

COST A32 SWickyNotes Workshop in Munich: DEMO PAGE

Finally, you can try to annotate one of the Digital Libraries in the **Philosource network**, a federation of Talia based digital libraries built within the Discovery EU project:

Contextual Contextual My Noteboo Other Noteb

Relations involving **start.htm**

start.htm

Subjects Sources

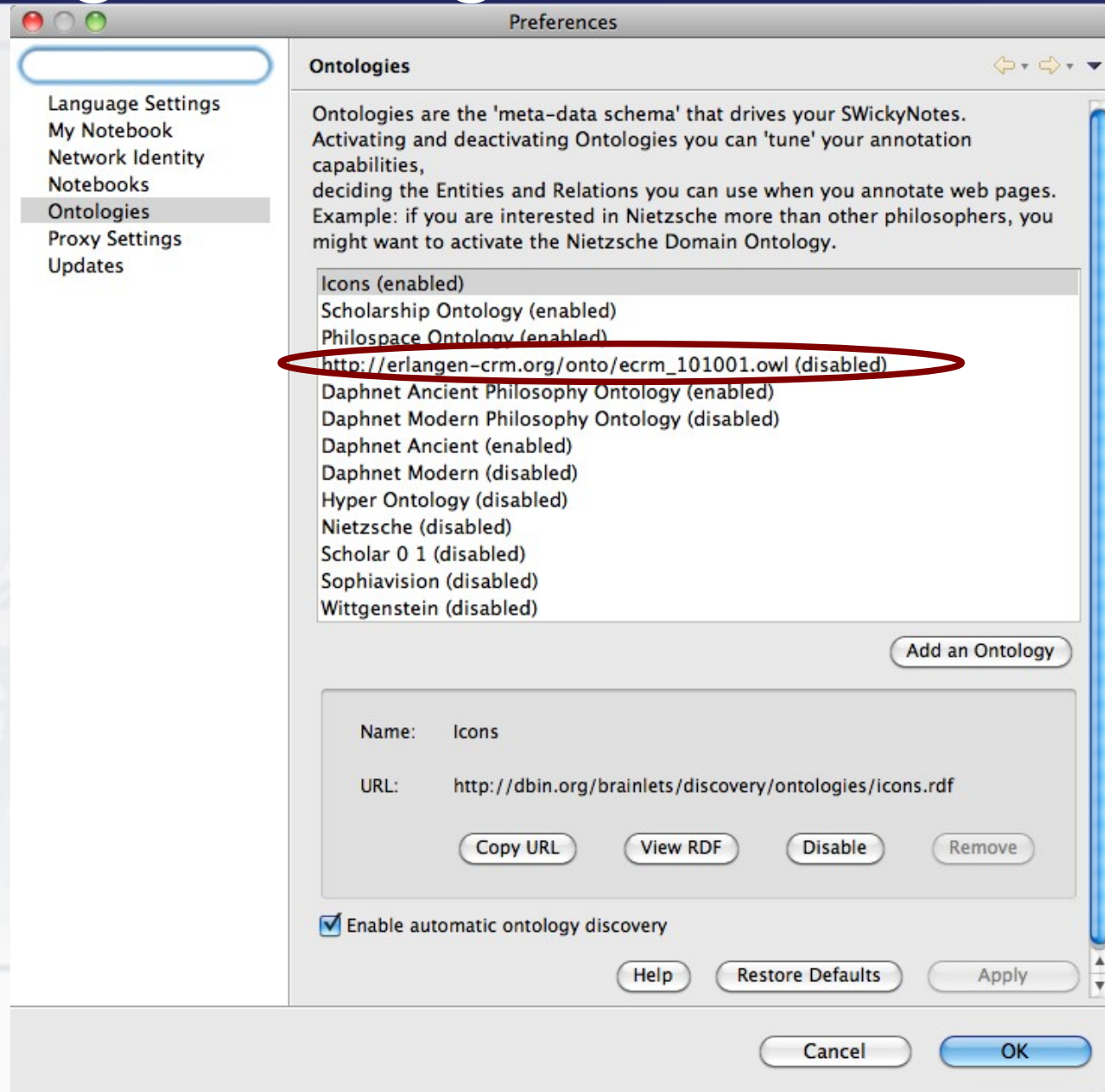
Create new item Refresh

► All Subjects

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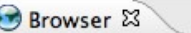
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SwickyNotes: Selecting Ontologies




“Cretans are always Liars” ... annotated

SWickyNotes V2.1.7 (MurucaSKA)

Browser  <http://presocratics.daphnet.org/texts/Presocratics/3-B>



Presocratics SOURCE STANDARD MODE PRESOCRATICS

Home > Presocratics > 3-B Epimenides  Print

1-B Orpheus >
2-A Musaios >
2-B Musaios >
3-A Epimenides >
3-B Epimenides >
3-B,1 >
3-B,2 >
3-B,3 >
3-B,4 >
3-B,5 >
3-B,6 >
3-B,7 >
3-B,8 >
3-B,9 >
3-B,10 >

3 B 1. PAUL. *ad Tit.*
1, 12. Disse uno di
loro [*Cretesi*], un loro
profeta:
Sempre mentono i
Cretesi, male bestie,
ventri pigri.^{6*}


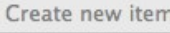
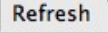
CLEM. ALEX.
strom. I 59 [II 37, 21].
Come settimo [*tra i*
sette sapienti] alcuni
enumerarono
Periandro di Corinto,
altri Anacarsi scita,
altri ancora Epimenide

ΧΡΗΣΜΟΙ. ΚΡΗΤΙΚΑ
3 B 1. PAUL. *ad Tit.*
1, 12. [I 31. 30] Εἰπέν
τις ἐξ αὐτῶν
[Κρετῆρ], ἴδιος
αὐτῶν προφήτης
[I 32. i App.]
Κρήτες αἰὲ
ψεῦσται, κακὰ
θηρία, γαστέρες
ἀργαί.  
CLEM. Str. I 59 (II
37, 21 St.) τὸν δὲ
ἐβδομον [Weisen] οἱ
μὲν Περίανδρον

2 Note
sorted by: [has-creation-date](#), [has-Note-author](#), and [label](#); then by... • ☐ grouped as sorted

1.
Alle Kreter lügen [E][X]
Posted by [gradmans](#) on 10-10-2010 15:27:57
[Show in browser](#)
No comment associated with this Note.
[1, 12. \[I 31. 30\]](#) [is related to](#) [Lügenparadox](#)
[εἰπέν τις ἐξ αὐτῶν](#) [\[Κρετῆρ\]](#) ...

2.
Note by: gradmans (10-10-2010 15:47:02) [E][X]
Posted by [gradmans](#) on 10-10-2010 15:47:02
[Show in browser](#)
No comment associated with this Note.
[εἰπέν τις ἐξ αὐτῶν](#) [\[Κρετῆρ\]](#), ἴδιος [αὐτῶν](#) ... [definesPhilosophicalSubject](#) [Lügenparadox](#)

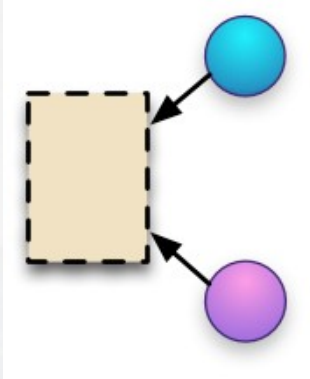
Subjects  Sources  Create new item  Refresh

- Title
 - Titles
 - Daemon
 - DialogueMethod
 - Divination
 - EthicsOfVirtue
 - I know that I do not know
 - JoinInquiry
 - YoungsEducation
 - Event

- SemLib (<http://www.semlibproject.eu/>) is a continuation of Discovery in a EU funded project under FP7 working on
 - A Tool to export existing metadata in RDF and publish it as **Linked Data** (Web of Data);
 - A Semantic **Annotation** System, to exploit user-generated RDF metadata and publish it as **Linked Data**;
 - A Semantic Recommender System, to use **Linked Data** to improve searching and browsing in the DLs.

Shared Canvas

- Shared Canvas (<http://www.shared-canvas.org>) is about annotation again – but in a much more sophisticated data model enabling multiple and potentially concurrent layered annotations.
 - Demo at <http://www.shared-canvas.org/impl/demo1/>
-
- Common traits
 - Use of RDF as underlying technology
 - Emulation of well known annotation functionality on the Web



Scholarly Use of Semantic Technology ... beyond Emulation of Annotation



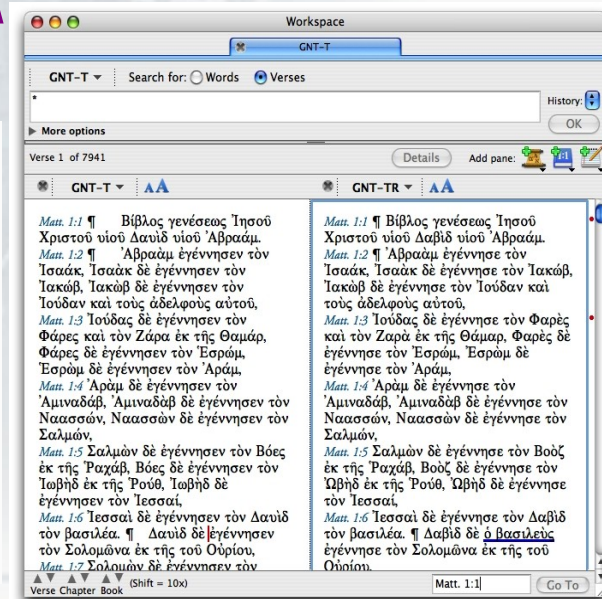
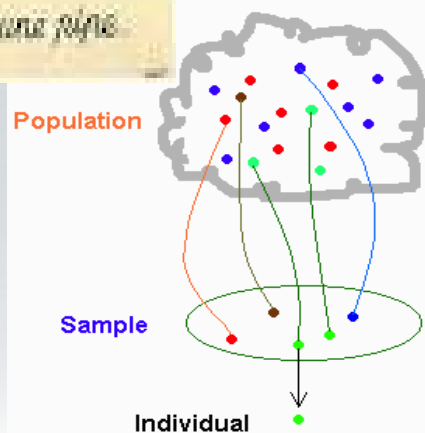
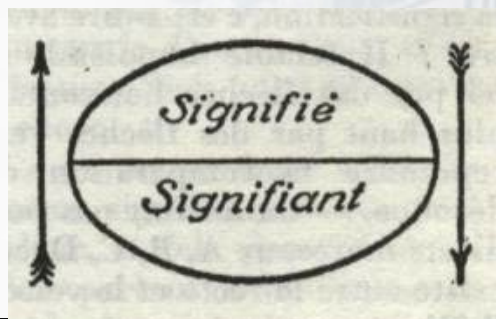
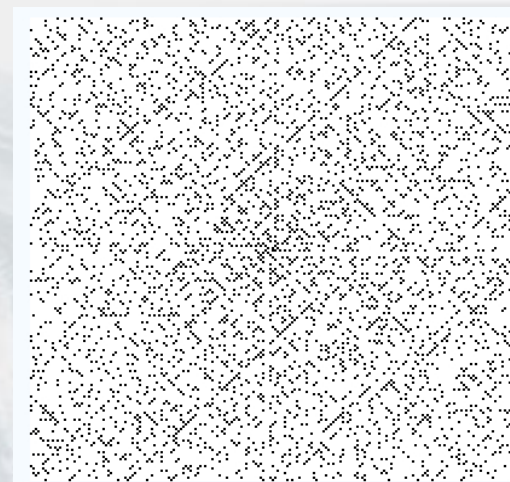
Scholarly Primitives

- Discovering
- Annotating
- Comparing
- Referring
- Sampling
- Illustrating
- Representing

enlarged font
Fourscore and seven
years ago our fathers
brought forth on this
continent a new nation,
conceived in liberty,
and dedicated to the
propositions that all
men are created equal.
new Now we are engaged in a
r, r that
nation
the margins

Indent and
bold, up
to "our"

put in italics



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Digital Humanities Functionality (WP3)



- Can we enable **digital scholarship** building on combined EDM metadata and digital surrogates ...
- ... building on an ontological, granular representation of John Unsworth's **scholarly primitives** (or their successors according to Blanke/Hedges 2011)?
- And what is the use of the resulting increasingly complex **social semantic scholarly graph** that extends the EDM data with RDF statements such as
 - $\text{Version}_A - \text{isSuccessorOf} - \text{Version}_B$
 - $\text{Scribe}_Y - \text{copiedFrom} - \text{Scribe}_Z$
 - $\text{Statement}_1 - \text{contradicts} - \text{Statement}_2$
- → what do you **obtain** from on inferencing on this graph ...
- → and which are the **limitations** of such an approach?



WP3: Digital Humanities Related Engineering



Goal: lower the barriers for **digital content curation** by providing an integrated, flexible, semantic based environment targeted to **digital humanities scholars**

Structured or semi-structured data sources

Compliant web pages with metadata

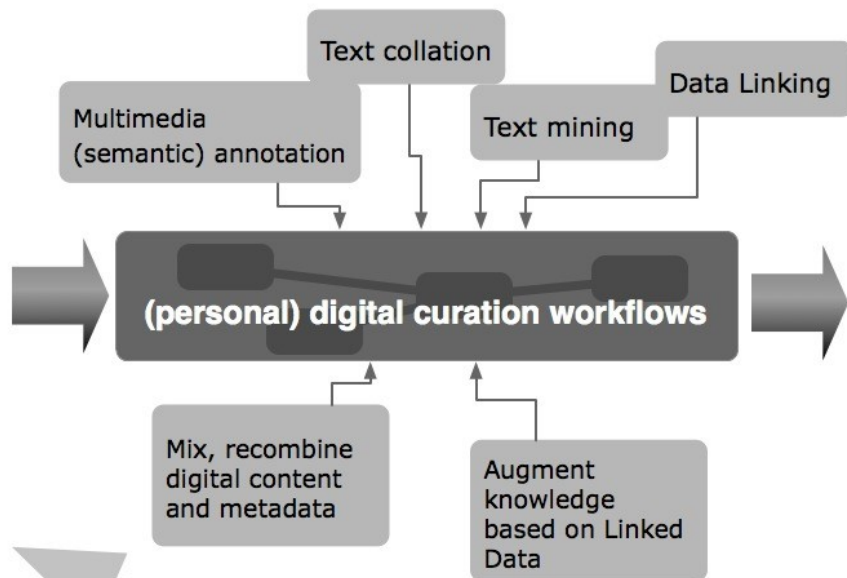
Europeana (EDM)

Partners/third party platforms

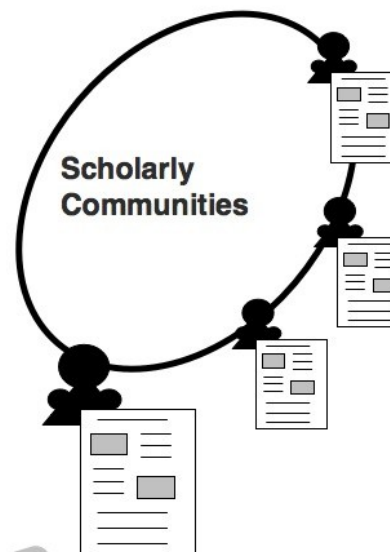
Linked Open Data Cloud

Web of Data

Digital re-mix and curation tool for humanities scholars and domain experts



- Custom virtual collections
- Curated, domain specific mashups
- Scientific contributions
- etc..

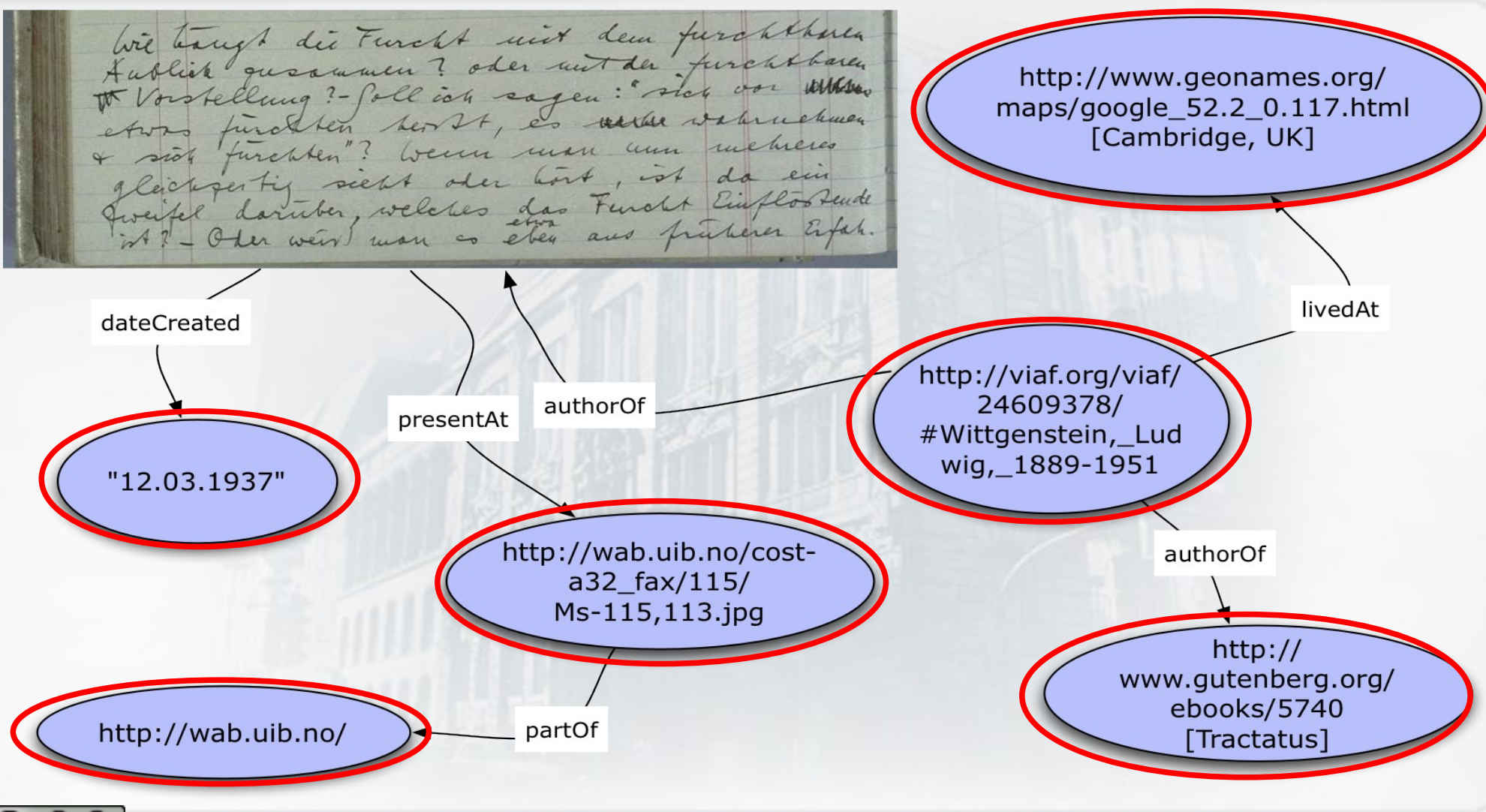
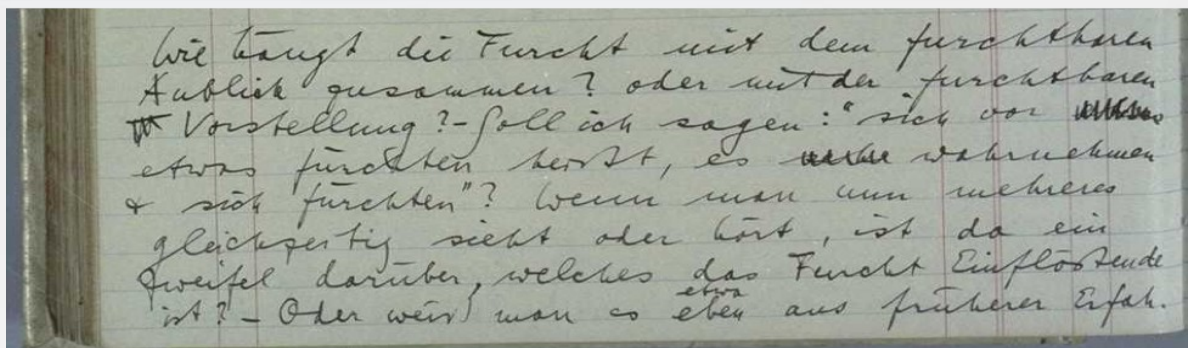


Linked, semantically structured content further enriching the data web

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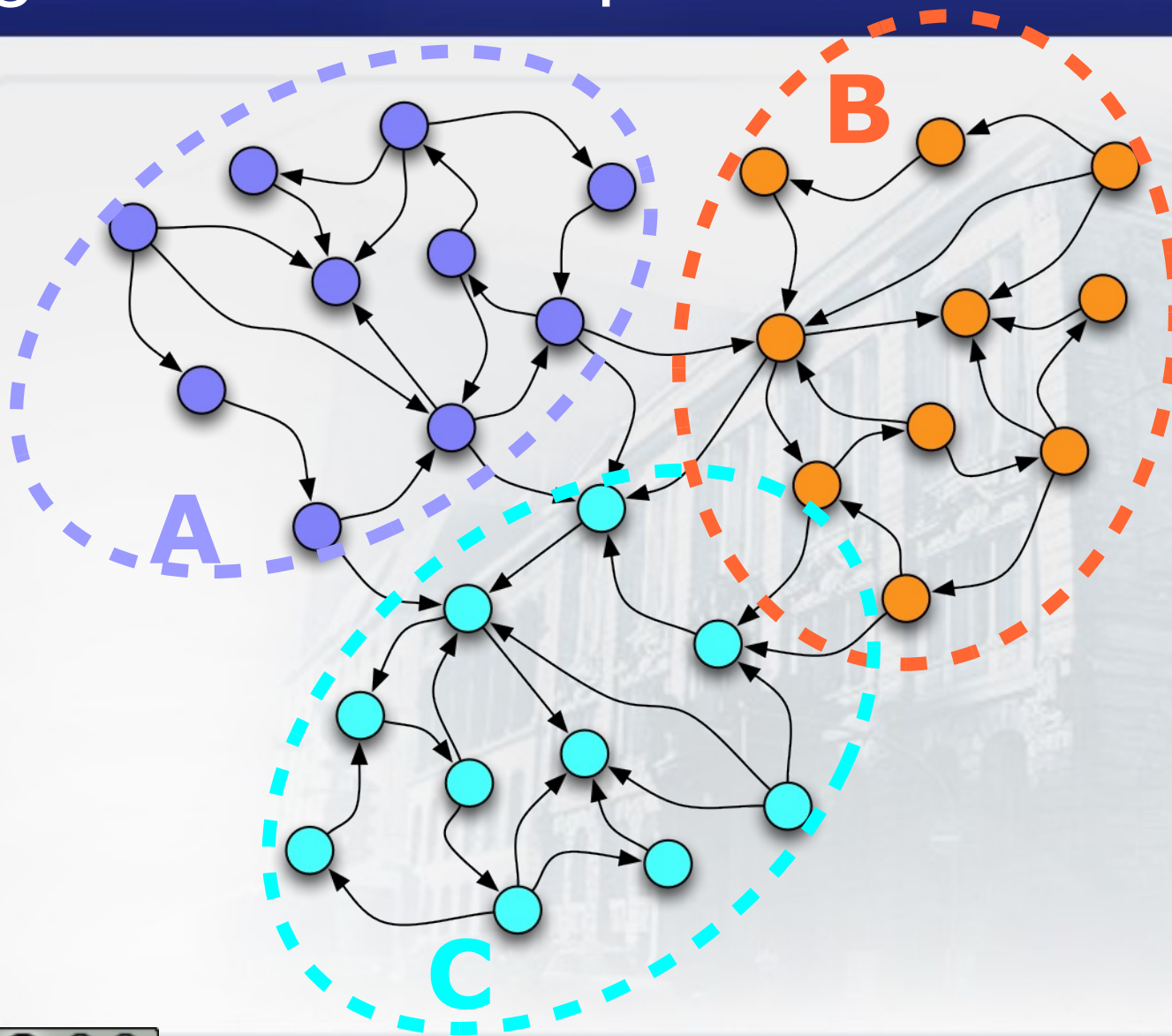
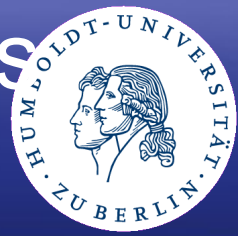
Contextualisation



For Discussion



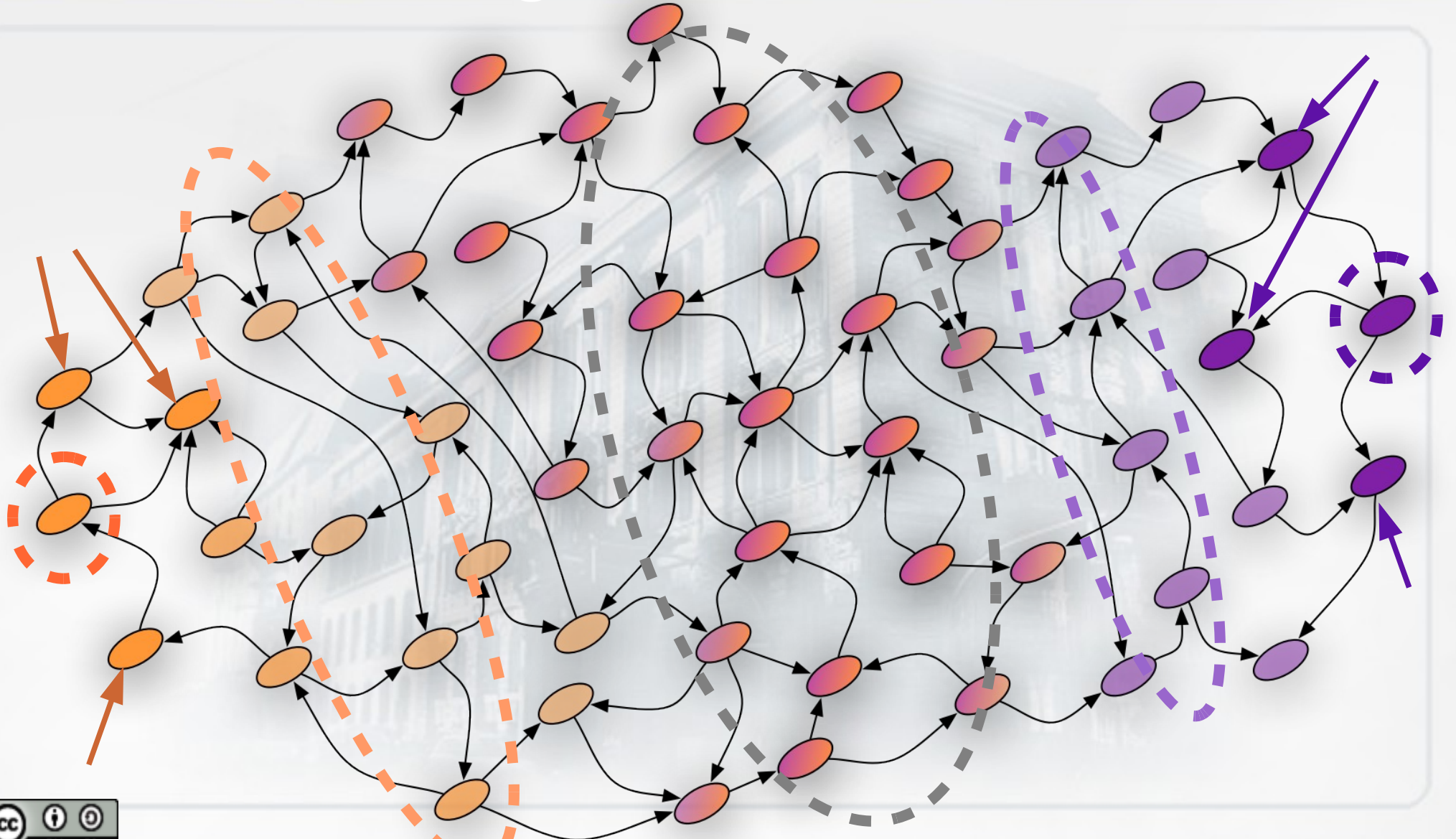
Modelling Documents as RDF Aggregations generates new questions ...



- Where do resource aggregations 'start'? Where do they 'end'?
- And what constitutes document boundaries??
- And which node was connected to which one at a given time???



Aggregations and Context: Calculating Closeness



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How 'semantic' is it – as seen from the DH perspective?



- „I called this graph the Semantic Web, but maybe it should have been **Giant Global Graph!**“ (TBL, <http://dig.csail.mit.edu/breadcrumbs/node/215>)
- From a DH perspective, there is not much semantics here ...
- ... but the attribute has already been burnt, anyway :)
- “Thinking in the Graph” (TBL) - will DH ever do so?
 - Our breakfast will not be in the Graph, nor other essentials
 - But the bulk of our scholarship will be there quite soon, and we start realizing this
- → Time for the Linked Data Community to prepare for new challenges
- The discussion should not be about **infrastructure** but about **epistemological foundations**: this is where the issues are located!



Issues

- **Signification** and **Meaning**
 - ... much more than just names pointing to things
 - How to model diachronous aspects?
- **Text, Context, Subtext**
 - What about the *explicit*, the *implicit* and the things that *are not said* at all?
- **Interpretation**
 - Is inherently non-deterministic!
- **Logic**: the AI rathole has never been appealing for DH
 - Need of support for *non-monotonous, non-deterministic, modal* reasoning strategies
- Linked Data **Quality, Versioning, Provenance** ...

A faded, light blue background image of a large, multi-story building with many windows, likely a university building.

Thank you!

Selected Reading

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